

Flow up of implementation celli pass play

Course Instructor	Mustafa Hasan Omar				
E-mail	mustafahassan550@gmail.com				
Title	Ceramic Engineering				
Course Coordinator					
Course Objective	<p>a) Provide basic understanding of ceramic engineering.</p> <p>b) Understand the specific details regarding composition and properties.</p> <p>c) Learn the classification of ceramic materials.</p> <p>d) Understand the basic techniques related to the manufacturing of ceramic materials.</p>				
Course Description	Principles of ceramic engineering, Classification of ceramic products with respect to their functions. Traditional and advanced ceramics. Methods of ceramic production: Natural and synthetic raw materials, shaping methods, drying and firing of ceramic articles. Effect of processing on the development of microstructures and properties. Examples of ceramics selected from the major groups of refractories, glasses and glass ceramics, bioceramics and nanoceramics.				
Textbook	<p>1- Fundamentals of Ceramics – Barsoum.</p> <p>2- Ceramic Materials, Science & Engineering – C. Carter & M. Norton,</p> <p>3- Modern Ceramic Engineering 2nd Edition – David Richerson.</p>				
Course Assessments	Monthly Exam	Attendance	Quizzes	Seminars	Final Exam
	As (20%)	As (5%)	As (5%)	As (10%)	As (60%)
General Notes	Type here general notes regarding the course				

Republic of Iraq
The Ministry Of Higher Education
& Scientific Research



University: Diyala
College: Engineering
Department: Materials Engineering
Stage: second
Lecturer name: Mustafa H. Omar
Qualification: Ph.D. in Materials
Technologies.
Place of work: Materials Eng. Dept.

Course Weekly Outline

Week	Date	Topes Covered	Lab. Experiment Assignments	Notes
1		Introduction to Ceramics: Material and General Properties	-	
2		Bonding in Ceramics and Ceramic Crystal Structure	-	
3		Properties of Ceramic Materials	-	
4		Applications of Ceramic Materials	-	
5		Monthly Exam		
6		Classification of Ceramic Materials	-	
7		Raw Materials, Natural Minerals, Technical Ceramic Raw Minerals, Oxides, Non- .Oxides	-	
8		Introduction to Glass	-	
9		Introduction to Shaping and Forming of Ceramics	-	
10		Monthly Exam		
11		Sintering and Grain Growth	-	
12		Furnaces	-	
13		Refractories	-	

14		Nanoceramics	-	
15		Bioceramics	-	

INSTRUCTOR Signature:

Mustafa Hasan Omar

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